United States
Environmental Protection
Agency

Office of Public Affairs
Region 4
345 Courtland Street, N.E.
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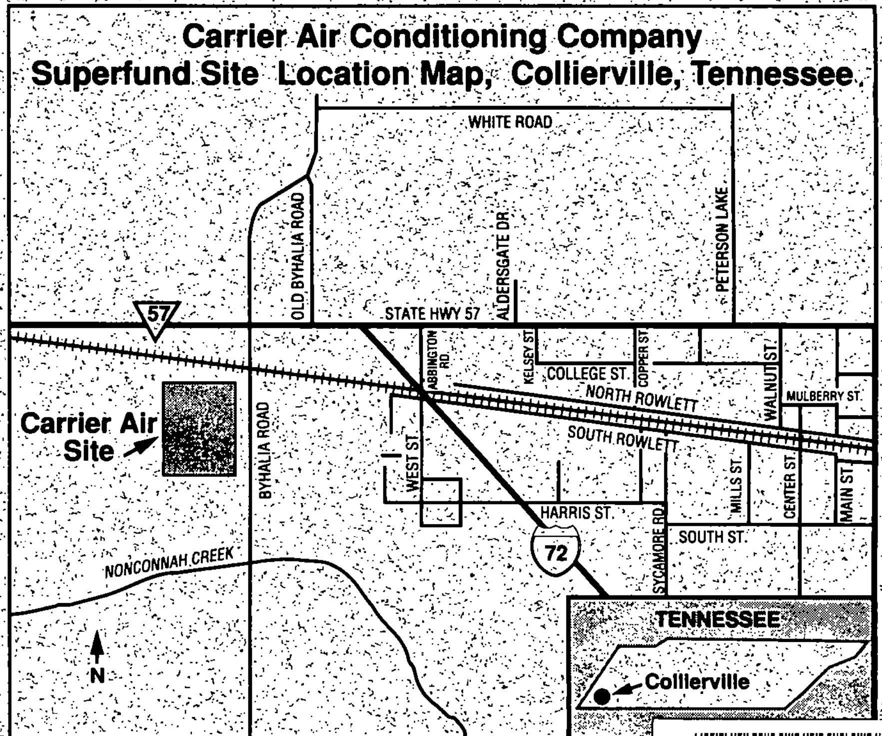
Alabama, Florida, Georgia,
Kentucky, Mississippi,
North Carolina,
South Carolina, Tennessee

EPA

Superfund Study Begins

Carrier Air Conditioning Company Superfund Site, Collierville, Tennessee

May 1990



Carrier Air Conditioning Company Superfund Site Location Map, Collierville, Tennessee

PUBLIC INFORMATION SESSION:

Representatives of the U.S. EPA will be available to provide information and answer questions at a public meeting to be held at:

The Collierville Town Hall
101 N. Walnut Street
Collierville, Tennessee

Tuesday, May 8, 1990
7:00 PM to 9:00 PM

Printed on recycled paper

INTRODUCTION

On December 15, 1989, Carrier Air Conditioning Company (Carrier), under the oversight of the United States Environmental Protection Agency (EPA), began a long-term investigation and study of the Carrier Air Conditioning Company ***Superfund*** *site in Collierville, Tennessee. The first part of the process is called a Remedial Investigation (RI), and will identify the nature and extent of possible contamination at or near the site. The second part is called a Feasibility Study (FS). It will develop and analyze various alternatives for addressing any contamination problems identified in the RI.*

This fact sheet provides background information regarding the Carrier site and summarizes the activities planned for the site. It also describes EPA's Superfund program. A glossary of terms used in this fact sheet is provided on page 3. All words and phrases defined in the glossary appear in bold print the first time they are used. Various documents prepared for the site, as well as Superfund program information, are available for public review at the information repository identified in the "Available Information" section on page 5.

BACKGROUND INFORMATION

The Carrier Air Conditioning Company is located at 97 South Byhalia Road, southwest of the intersection of Highway 57 and Byhalia Road, in Collierville, Tennessee. The 145-acre site is currently an operating industrial facility in which residential air conditioners are manufactured. Prior to Carrier's construction in 1967, the site was farmland.

The site is situated approximately one-half mile east of a residential area. It consists of four industrial buildings, a former lagoon, and a former soccer/softball field. It is less than a mile from the Collierville Water Plant #2, and Nonconnah Creek flows through the property.

Residents obtain water from either municipal or private wells for drinking and cooking. Collierville public water is supplied by two water plants. Water Plant #2 contains two wells and is located 2,000 feet northwest of the Carrier site. Water Plant #1 contains three wells and is located in downtown Collierville, one and one-half miles east of the Carrier site.

Since Carrier began its operations, there have been three reported releases of **trichloroethylene (TCE)** into the environment:

- In 1972, Carrier began operating an unlined lagoon for the purpose of containing clarifier sludges. TCE has been detected in the lagoon area. It appears that TCE from the lagoon area leaked into the underlying groundwater and contaminated it. In November, 1980, Carrier removed all visible wastes and soils from the lagoon and transported them to a hazardous waste disposal facility.

- On June 20, 1979, a filter cover over a heated degreasing unit failed to operate properly. This resulted in a TCE spill estimated at several thousand gallons. Most of the TCE collected on the plant's south parking lot. The asphalt from the parking lot was later removed and disposed of in a properly licensed hazardous waste facility. In 1981, Carrier completed follow-up testing of soils in the spill area.

- On January 23, 1985, following a period of heavy rainfall, an underground pipe from a TCE holding tank ruptured, spilling an unknown amount of the chemical. During cleanup activities, Carrier recovered 542 gallons of TCE and removed soil contaminated by the spill. After the soil removal, Carrier installed five monitoring wells as part of a ground water investigation. Some of those wells were shown to contain concentrations of TCE.

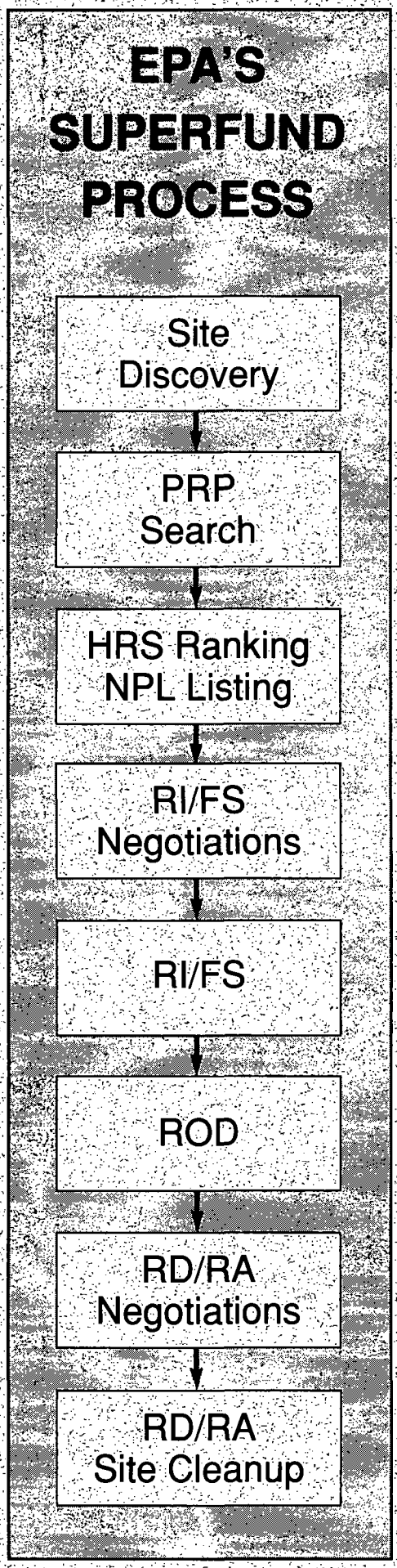
Since the 1985 spill, the Tennessee Department of Health and the Environment (TDHE) continued ground water monitoring at the site on a regular basis. In July 1986, the west well in Water Plant #2 was found to be contaminated by low levels of TCE. Shortly thereafter, TDHE tested all the wells in both municipal water plants. Although low levels of TCE were found in both wells in Water Plant #2, no TCE was found in any of the wells in Water Plant #1 or in the treated water from either plant.

In September 1986, the Town of Collierville (Collierville) conducted additional sampling at the site. These samples confirmed the TDHE results described above. In response, Collierville closed the west well in Water Plant #2 and worked with TDHE to initiate sampling of the private wells in the area. The results from the private wells showed TCE levels below federal drinking water standards, and after additional testing, Collierville turned the west well in Water Plant #2 back on. Collierville continues to monitor that well, in addition to treating the municipal water to ensure that it is safe to use.

In 1987 and 1988, Carrier conducted an extensive site investigation under an agreement with TDHE. During this investigation, soil and ground water samples were taken and analyzed for contamination. Air sampling was conducted, and a long-term ground water monitoring program was initiated. Sampling indicated measurable amounts of TCE in the soils and smaller amounts of TCE in the ground water at the site. No measurable contaminants were found in the air. The site investigation also confirmed the earlier finding of low TCE concentrations in the groundwater from Water Plant #2.

In March 1987, the Carrier site was placed on TDHE's List of Hazardous Substances Sites. In June 1988, it was proposed for inclusion on the EPA's **National Priorities List (NPL)**. In September 1989, Carrier, EPA, and TDHE signed an agreement called a Consent Order in which Carrier agreed to conduct the Remedial Investigation and Feasibility Study scheduled to begin. The Consent Order became effective December 15, 1989, which was the date EPA approved Carrier's formal work plan to conduct the investigation and study. In February 1990, Collierville again closed Water Plant #2 after elevated levels of TCE were found in the untreated water of two wells at the rear of the Carrier plant.

EPA'S SUPERFUND PROCESS



The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), more commonly known as "Superfund," was passed in 1980 and amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986. The Superfund law authorizes EPA to investigate and respond to releases of hazardous substances that may endanger public health and/or the environment. At a site such as Carrier, where the party responsible for the release is conducting the investigation and cleanup, EPA oversees the work to ensure that all is done in accordance with the law. The graphic on the left provides a simplified view of how a Superfund project, like the one planned for the Carrier site, works.

After a site is initially discovered, it is investigated by the EPA and/or the state and then scored using a system that takes the following into account:

- possible health risks to the human population,
- potential hazards (e.g., from direct contact, inhalation, fire, or explosion) created by the substances at the site,
- potential for the substances at the site to contaminate air or drinking water supplies, and
- potential for the substances at the site to pollute or harm the environment.

If preliminary studies indicate that the site's problems pose a potentially serious risk to public health and/or the environment, it will be listed on the EPA's National Priorities List (NPL). Every site on the NPL qualifies for the federal Superfund program.

After a site is listed, EPA or the responsible parties under EPA supervision develop a work plan and conduct a Remedial Investigation (RI). The Carrier site is currently at this stage of the Superfund process. The RI assesses the nature and extent of contamination, and characterizes potential risks to the community and environment. If the RI indicates that contamination poses an unacceptable risk to the public health and the environment, EPA or the responsible parties perform a Feasibility Study (FS) to examine the various alternative measures to correct or control the contamination. When the study is completed, EPA or the responsible parties evaluate the alternatives identified, and EPA recommends the best alternative for the site. A public comment period is held to give members of the community the opportunity to submit their comments on the alternatives. A specific long-term action is then chosen and presented in the **Record of Decision (ROD)**. Once design activities are finished, the actual cleanup begins.

The time needed to complete each of these steps is different for every site. In general, an RI/FS takes about 18 months. Design of the long-term cleanup action takes about six months to a year. The actual cleanup typically takes one to two years, although treatment of contaminated groundwater, if needed, may take several years. Occasionally, the RI/FS will indicate that no further action is required at the site, in which case the site is removed from the NPL. Ongoing activities during the Superfund process include:

- **Regular Monitoring**. EPA monitors the site during remedial activities. If contamination becomes an imminent threat to public health or the environment during the RI/FS, EPA may conduct an emergency action to alleviate the problem.
- **Community Relations**. Throughout the Superfund process, EPA tries to keep residents and officials informed about activities at the site and provides opportunities for citizens to participate in the decision-making process. Public comment periods are a legal requirement of Superfund and are held at certain key points in the process so that citizens can voice their concerns and ask questions about the cleanup measures proposed for the site. EPA will consider citizen input when making decisions about the cleanup.

THE REMEDIAL INVESTIGATION

The investigations and studies that have been done to date provide Carrier with information regarding the kinds of contamination at the site and the locations of that contamination. Some work has already been performed at the site because Carrier and EPA did not want to delay site activities further. However, as stated in the Consent Order, Carrier, under the oversight of EPA, will conduct a complete investigation, called a Remedial Investigation (RI). The purpose of the RI is to determine the extent of the contamination and the risks to the public health and the environment.

The RI will be conducted in two phases. Phase I has been completed. During that phase, the following activities took place:

- Four soil borings were made at the site to test the extent of soil contamination. Three borings were placed in areas already identified as contaminated, and a fourth was placed in an area assumed to be uncontaminated.
- All on-site monitoring wells were sampled to determine the extent of ground water contamination.
- Water samples were taken from a drainage ditch in front of the Carrier plant (parallel to Byhalia Road) and a drainage ditch which crosses the site in a north/south direction. The water samples were analyzed to assess possible surface water contamination. Both ditches collect storm water runoff and flow into Nonconnah Creek. Water from Nonconnah Creek and plant species growing upstream and downstream of the site were also sampled and analyzed to assess potential surface water contamination.
- Air samples were collected and analyzed.
- Samples of untreated and treated drinking water from the Water Plant #2 were collected and analyzed for TCE contamination.

Also during Phase I, a treatability study, which is currently being conducted, was initiated. During this study, samples are taken and tested on-site to help identify the technologies that are best suited to address the contamination.

During Phase II of the RI, additional monitoring wells will be installed and soil samples collected. These borings and monitoring wells will also indicate the direction and rate at which the contamination may be moving. It is estimated that the RI will be completed by 1991.

GLOSSARY

Ground Water: Water that fills the spaces between soil, sand, rock, and gravel particles beneath the earth's surface. Precipitation, such as rain, reaches the ground and then slowly moves through soil, sand, gravel, and rock into small cracks and crevices below the ground surface. During a process which can take many years, this water has the potential of providing a water source. This water may then be withdrawn from wells for use as drinking water.

Monitoring Wells: Special wells drilled into the earth to study ground water. Monitoring well samples are taken to determine the nature, extent, and distribution of contamination in ground water. Water elevations from monitoring wells are also used to determine ground water flow direction.

National Priorities List (NPL): U.S. EPA's list of the top priority hazardous waste sites in the country. Sites on the NPL are eligible for federal cleanup money under Superfund.

Record of Decision (ROD): A public document that explains which cleanup alternative will be used at a Superfund site.

Soil Borings: Special equipment drilled into the earth's surface to take samples and study the soil content from ground level to the depth of drilling.

Superfund: A term commonly used to describe the federal program established by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) passed into law in 1980 and amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA). It is administered by EPA to investigate and clean up actual and potential hazardous waste problems.

Surface Water: Standing or flowing water located on the ground surface, such as streams, rivers, ponds, lakes, or drainage ditches.

Trichloroethylene (TCE): A colorless and odorless liquid commonly used as a solvent and degreaser. TCE can be absorbed by humans through inhalation and ingestion, and is associated with kidney and liver damage.

TECHNICAL ASSISTANCE GRANTS AVAILABLE

U.S. EPA recently introduced a new program which enables groups of interested citizens to obtain assistance in interpreting and understanding the findings of the remedial process. The Technical Assistance Grants (TAGs) provide up to $50,000 to community groups wishing to hire consultants to interpret sampling results, reports, and other documents. Twenty percent of the requested funding amount must be matched by the group. For example, if $50,000 were requested, the group must provide an additional $10,000, or obtain it from some other source. The matching funds may be paid in either cash or services, and may originate from any source. TAGs cannot be used to duplicate field work or lab work. They may be used only to understand or interpret existing documents and activities conducted at the site.

Municipalities or other government agencies are not eligible to receive TAGs. However, government officials may belong to a group requesting a TAG. The Carrier site is at an early stage in the remedial process. A TAG may be more useful to local residents several months from now. However, the process for obtaining a TAG is fairly complex, and now may be a good time to learn more about it. Additional information about TAGs is available in the Carrier information repository or from U.S. EPA Region IV in Atlanta, Georgia. The location of the information repository and EPA's phone number are listed in the "Available Information" section below.

AVAILABLE INFORMATION

Anyone interested in obtaining more information about the Carrier site is encouraged to review the various documents that have been prepared for the site. Copies of the applicable laws, the work plan for the Remedial Investigation, and the Community Relations Plan are available for review in the information repository at:

Memphis/Shelby County Public Library
91 Walnut Street
Collierville, Tennessee
(901)-853-2333

On **Tuesday, May 8, 1990**, representatives from EPA will be available at the Collierville Town Hall, from 7:00 PM to 9:00 PM, to provide information and answer any questions you may have regarding the project. In the meantime, the following EPA representatives may be contacted if you have questions:

Elizabeth Brown
Remedial Project Manager
U.S. EPA
(404)-347-7791
1-800-347-1754

or

Michael Henderson
Community Relations Coordinator
U.S. EPA
(404)-347-3004
1-800-347-1754

MAILING LIST ADDITIONS / CORRECTIONS

If you would like to be placed on the mailing list for the Carrier site, please fill out and mail this form to:

Michael Henderson
Community Relations Coordinator
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Name: _____

Address: _____

_____

Telephone: _____

Affiliation: _____

U. S. Environmental Protection Agency
Region 4
Office of Public Affairs
345 Courtland Street, N.E.
Atlanta, GA 30365

RELEASABLE BJ (NAME)
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